

## CLAIMS

1. Form II 5,6,-dichloro-2-(isopropylamino)-1- $\beta$ -L-ribofuranosyl-1H-benzimidazole having substantially the same X-ray powder diffraction pattern as Figure 2, wherein said X-ray powder diffraction pattern is obtained with a diffractometer equipped with a diffracted beam curved graphite monochromator using copper K $\alpha$  X-radiation.
2. A crystalline form of 5,6,-dichloro-2-(isopropylamino)-1- $\beta$ -L-ribofuranosyl-1H-benzimidazole characterized by an X-ray powder diffraction pattern expressed in terms of 2 theta angles and obtained with a diffractometer equipped with a diffracted beam curved graphite monochromator using copper K $\alpha$  X-radiation, wherein said X-ray powder diffraction pattern comprises 2 theta angles at five or more positions selected from the group consisting of at five or more of the following positions: 7.91  $\pm$ 0.09, 17.33  $\pm$ 0.09, 18.23  $\pm$ 0.95, 19.60  $\pm$ 0.09, 21.88  $\pm$ 0.09, 23.24  $\pm$ 0.09, 23.92  $\pm$ 0.09, 25.27  $\pm$ 0.09, 27.70  $\pm$ 0.09, and 29.21  $\pm$ 0.09 degrees.
3. 5,6,-Dichloro-2-(isopropylamino)-1- $\beta$ -L-ribofuranosyl-1H-benzimidazole ethanol solvate having substantially the same X-ray powder diffraction pattern as Figure 3, wherein said X-ray powder diffraction pattern is obtained with a diffractometer equipped with a diffracted beam curved graphite monochromator using copper K $\alpha$  X-radiation.
4. Ethanol solvate of 5,6,-dichloro-2-(isopropylamino)-1- $\beta$ -L-ribofuranosyl-1H-benzimidazole characterized by an X-ray powder diffraction pattern expressed in terms of 2 theta angles and obtained with a diffractometer equipped with a diffracted beam curved graphite monochromator using copper K $\alpha$  X-radiation, wherein said X-ray powder diffraction pattern comprises 2 theta angles at five or more positions selected from the group consisting of at five or more of the following positions: 9.07

$\pm 0.05$ ,  $10.38 \pm 0.05$ ,  $15.95 \pm 0.05$ ,  $17.72 \pm 0.05$ ,  $20.75 \pm 0.05$ ,  $21.37 \pm 0.05$ ,  $22.96 \pm 0.05$ ,  $23.93 \pm 0.05$ ,  $25.40 \pm 0.05$ , and  $29.05 \pm 0.05$  degrees.

5 5. Form V 5,6,-dichloro-2-(isopropylamino)-1- $\beta$ -L-ribofuranosyl-1H-benzimidazole having substantially the same X-ray powder diffraction pattern as Figure 5, wherein said X-ray powder diffraction pattern is obtained with a diffractometer equipped with a diffracted beam curved graphite monochromator using copper K $\alpha$  X-radiation.

10 6. A crystalline form of 5,6,-dichloro-2-(isopropylamino)-1- $\beta$ -L-ribofuranosyl-1H-benzimidazole characterized by an X-ray powder diffraction pattern expressed in terms of 2 theta angles and obtained with a diffractometer equipped with a diffracted beam curved graphite monochromator using copper K $\alpha$  X-radiation, wherein said X-ray powder diffraction pattern comprises 2 theta angles at five or more positions  
15 selected from the group consisting of at five or more of the following positions:  
 $13.30 \pm 0.05$ ,  $18.13 \pm 0.05$ ,  $18.78 \pm 0.05$ ,  $20.41 \pm 0.05$ ,  $21.75 \pm 0.05$ ,  $23.02 \pm 0.05$ ,  $26.87 \pm 0.05$ ,  $28.34 \pm 0.05$ ,  $28.55 \pm 0.05$ , and  $30.22 \pm 0.05$  degrees.

20 7. A composition comprising an admixture of two or more forms or solvates of 5,6,-dichloro-2-(isopropylamino)-1- $\beta$ -L-ribofuranosyl-1H-benzimidazole according to any of claims 1-6.

25 8. A composition comprising Form II 5,6,-dichloro-2-(isopropylamino)-1- $\beta$ -L-ribofuranosyl-1H-benzimidazole according to Claim 1 and amorphous 5,6,-dichloro-2-(isopropylamino)-1- $\beta$ -L-ribofuranosyl-1H-benzimidazole.

30 9. A composition comprising Form I 5,6,-dichloro-2-(isopropylamino)-1- $\beta$ -L-ribofuranosyl-1H-benzimidazole having substantially the same X-ray powder diffraction pattern as Figure 1 and Form V 5,6,-dichloro-2-(isopropylamino)-1- $\beta$ -L-ribofuranosyl-1H-benzimidazole having substantially the same X-ray powder

diffraction pattern as Figure 5, wherein said X-ray powder diffraction patterns are obtained with a diffractometer equipped with a diffracted beam curved graphite monochromator using copper K $\alpha$  X-radiation.

- 5 10. The composition according to claim 9, further comprising Form IV 5,6,-dichloro-2-(isopropylamino)-1- $\beta$ -L-ribofuranosyl-1H-benzimidazole characterized by the X-ray powder diffraction pattern expressed in terms of 2 theta angles and obtained with a diffractometer equipped with a diffracted beam curved graphite monochromator using copper K $\alpha$  X-radiation, wherein said X-ray powder diffraction
- 10 pattern comprises 2 theta angles at five or more positions selected from the group consisting of at five or more of the following positions:  $9.29 \pm 0.05$ ,  $16.04 \pm 0.05$ ,  $18.67 \pm 0.05$ ,  $22.06 \pm 0.05$ ,  $22.68 \pm 0.05$ ,  $23.34 \pm 0.05$ ,  $24.40 \pm 0.05$ ,  $29.64 \pm 0.05$ ,  $30.92 \pm 0.05$ , and  $31.62 \pm 0.05$  degrees.

- 15 11. A pharmaceutical composition comprising a compound as claimed in any one of claims 1 to 6 and at least one pharmaceutically acceptable carrier therefor.

- 20 12. 5,6,-Dichloro-2-(isopropylamino)-1- $\beta$ -L-ribofuranosyl-1H-benzimidazole as claimed in any one of claims 1-6 for use in medical therapy.

- 25 13. Use of 5,6,-dichloro-2-(isopropylamino)-1- $\beta$ -L-ribofuranosyl-1H-benzimidazole as claimed in any one of claims 1 to 6 in the preparation of a medicament for the treatment of a viral infection.

- 30 14. A method for the treatment of a viral infection a human which comprises administering to the human host, an effective antiviral amount of a solvate or crystalline form of 5,6,-dichloro-2-(isopropylamino)-1- $\beta$ -L-ribofuranosyl-1H-benzimidazole as claimed in any one of claims 1 to 6.

15. A process for the production of 5,6-dichloro-2-(isopropylamino)-1- $\beta$ -L-ribofuranosyl-1H-benzimidazole in an anhydrous crystalline form said process comprising the steps of:

5 a) providing 5,6-dichloro-2-(isopropylamino)-1-β-L-ribofuranosyl-1H-benzimidazole in solution either in free base or salt form;

b) isolating 5,6,-dichloro-2-(isopropylamino)-1-β-L-ribofuranosyl-1H-benzimidazole from the solution and optionally removing unbound solvent leaving the 5,6,-dichloro-2-(isopropylamino)-1-β-L-ribofuranosyl-1H-benzimidazole in substantially dry form;

10 c) treating 5,6,-dichloro-2-(isopropylamino)-1-β-L-ribofuranosyl-1H-benzimidazole with a solubilising solvent serving to convert an amount of said optionally dried 5,6,-dichloro-2-(isopropylamino)-1-β-L-ribofuranosyl-1H-benzimidazole into said 5,6,-dichloro-2-(isopropylamino)-1-β-L-ribofuranosyl-1H-benzimidazole anhydrous crystalline form; and

15 d) isolating said anhydrous crystalline form.

# SECRET

Add A4